

**Translation**

**PATENT COOPERATION TREATY**

**PCT**

**Rec'd PCT/PTO**

**4 MAY 2006**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>2003P00534WO</b>		<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/003608</b>	International filing date (day/month/year) <b>05.04.2004</b>	Priority date (day/month/year) <b>04.04.2003</b>	
International Patent Classification (IPC) or national classification and IPC			
Applicant <b>BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH</b>			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003608

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-7 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-11 \_\_\_\_\_ received by this Authority on 23.02.2005 with letter
- nos.\* \_\_\_\_\_ received by this Authority on of 21.02.2005
- ☒ the drawings:
- sheets 1/2-2/2 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	2-6, 8-11	YES
	Claims	1, 7	NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
1. In the present report, reference is made to the following documents:			
D1: EP-A-1 180 652 (RANCO INC) 20 February 2002 (2002-02-20)			
D2: DE 43 19 652 A (BODENSEEWERK PERKIN ELMER CO) 15 December 1994 (1994-12-15).			
2. INDEPENDENT CLAIMS			
2.1 The present application fails to satisfy the requirements of PCT Article 33(1) because the subject matter of claims 1 and 7 lacks novelty (PCT Article 33(2)).			
Document D1 discloses (the references in brackets are to said document):			
claim 1: a method for operating a defrost heater in a refrigerating appliance (see column 17, lines 9 and 10), said method comprising the following method steps:			
/...			

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

- a) detecting a voltage level of the power supply for the defrost heater (see column 17, lines 36 and 37, and claim 23);
- b) determining a duty cycle of the supply current as a function of the detected voltage level (see column 17, lines 39 to 41);
- c) supplying current, in accordance with the determined keyed duty cycle, to the defrost heater (see column 17, lines 20 to 22).

claim 7: a refrigerating appliance with an integrated defrost heater (see claim 24) and with a detection circuit for detecting a voltage level at a supply connection of the defrost heater (see claim 2) and for producing a keyed control signal with a duty cycle that is dependent on the detected duty cycle (see claim 8) and an interrupter, which is actuated by the control signal, for the current supplied to the defrost heater (see figure 2a and column 6, lines 53 to 57).

In consequence, the subject matter of claims 1 and 7 lacks novelty (PCT Article 33(2)).

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## 3. DEPENDENT CLAIMS 2-6 AND 8-11

The remaining claims, claims 2-6 and 8-11, contain no features which, combined with the features of any claim to which they refer, meet the PCT requirements for inventive step. The reasons are as follows:

The features of dependent claims 2-6 and 8-11 have already been used for the same purpose in a similar method for the control of heating units (see in particular document D2, and also the other documents cited in the search report).

For a person skilled in the art, it would therefore be obvious to apply said features to like effect in a refrigerating appliance or a method as per document D1. In this way, he would arrive at a refrigerating appliance or a method, respectively, as per claims 2-6 and claims 8-11, without thereby being inventive.